

## SEQUENCE LISTING

<110> Tang, Y. Tom  
Guegler, Karl J.  
Corley, Neil C.  
Gorgone, Gina A.  
Yue, Henry

<120> CALCIUM BINDING PROTEIN

<130> PF-0635-2 DIV

<140> To Be Assigned

<141> Herewith

<160> 5

<170> PERL Program

<210> 1

<211> 337

<212> PRT

<213> Homo sapiens

<220> -

<223> 3734805

<400> 1

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Met | Lys | Lys | Met | Pro | Leu | Phe | Ser | Lys | Ser | His | Lys | Asn | Pro | Ala |  |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |  |
| Glu | Ile | Val | Lys | Ile | Leu | Lys | Asp | Asn | Leu | Ala | Ile | Leu | Glu | Lys |  |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |  |
| Gln | Asp | Lys | Lys | Thr | Asp | Lys | Ala | Ser | Glu | Glu | Val | Ser | Lys | Ser |  |
|     |     |     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |  |
| Leu | Gln | Ala | Met | Lys | Glu | Ile | Leu | Cys | Gly | Thr | Asn | Glu | Lys | Glu |  |
|     |     |     | 50  |     |     |     |     | 55  |     |     |     |     |     | 60  |  |
| Pro | Pro | Thr | Glu | Ala | Val | Ala | Gln | Leu | Ala | Gln | Glu | Leu | Tyr | Ser |  |
|     |     |     | 65  |     |     |     |     | 70  |     |     |     |     |     | 75  |  |
| Ser | Gly | Leu | Leu | Val | Thr | Leu | Ile | Ala | Asp | Leu | Gln | Leu | Ile | Asp |  |
|     |     |     | 80  |     |     |     |     | 85  |     |     |     |     |     | 90  |  |
| Phe | Glu | Gly | Lys | Lys | Asp | Val | Thr | Gln | Ile | Phe | Asn | Asn | Ile | Leu |  |
|     |     |     | 95  |     |     |     |     | 100 |     |     |     |     |     | 105 |  |
| Arg | Arg | Gln | Ile | Gly | Thr | Arg | Ser | Pro | Thr | Val | Glu | Tyr | Ile | Ser |  |
|     |     |     | 110 |     |     |     |     | 115 |     |     |     |     |     | 120 |  |
| Ala | His | Pro | His | Ile | Leu | Phe | Met | Leu | Leu | Lys | Gly | Tyr | Glu | Ala |  |
|     |     |     | 125 |     |     |     |     | 130 |     |     |     |     |     | 135 |  |
| Pro | Gln | Ile | Ala | Leu | Arg | Cys | Gly | Ile | Met | Leu | Arg | Glu | Cys | Ile |  |
|     |     |     | 140 |     |     |     |     | 145 |     |     |     |     |     | 150 |  |
| Arg | His | Glu | Pro | Leu | Ala | Lys | Ile | Ile | Leu | Phe | Ser | Asn | Gln | Phe |  |
|     |     |     | 155 |     |     |     |     | 160 |     |     |     |     |     | 165 |  |
| Arg | Asp | Phe | Phe | Lys | Tyr | Val | Glu | Leu | Ser | Thr | Phe | Asp | Ile | Ala |  |
|     |     |     | 170 |     |     |     |     | 175 |     |     |     |     |     | 180 |  |
| Ser | Asp | Ala | Phe | Ala | Thr | Phe | Lys | Asp | Leu | Leu | Thr | Arg | His | Lys |  |
|     |     |     | 185 |     |     |     |     | 190 |     |     |     |     |     | 195 |  |
| Val | Leu | Val | Ala | Asp | Phe | Leu | Glu | Gln | Asn | Tyr | Asp | Thr | Ile | Phe |  |
|     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |     | 210 |  |
| Glu | Asp | Tyr | Glu | Lys | Leu | Leu | Gln | Ser | Glu | Asn | Tyr | Val | Thr | Lys |  |
|     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     | 225 |  |

[illegible]

```
<210> 2
<211> 1344
<212> DNA
<213> Homo sapiens
```

<220> -  
<223> 3734805

[illegible]

```
<210> 3
<211> 341
<212> PRT
<213> Mus sp.
```

 $\langle 220 \rangle$  -

PF-0635-2 DIV

<223> g262934

<400> 3

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Phe | Pro | Phe | Gly | Lys | Ser | His | Lys | Ser | Pro | Ala | Asp | Ile | 15  |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     |     |     |
| Val | Lys | Asn | Leu | Lys | Glu | Ser | Met | Ala | Val | Leu | Glu | Lys | Gln | Asp | 30  |
|     |     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     |     |
| Ile | Ser | Asp | Lys | Lys | Ala | Glu | Lys | Ala | Thr | Glu | Glu | Val | Ser | Lys | 45  |
|     |     |     |     | 35  |     |     |     |     | 40  |     |     |     |     |     |     |
| Asn | Leu | Val | Ala | Met | Lys | Glu | Ile | Leu | Tyr | Gly | Thr | Asn | Glu | Lys | 60  |
|     |     |     |     | 50  |     |     |     |     | 55  |     |     |     |     |     |     |
| Glu | Pro | Gln | Thr | Glu | Ala | Val | Ala | Gln | Leu | Ala | Gln | Glu | Leu | Tyr | 75  |
|     |     |     |     | 65  |     |     |     |     | 70  |     |     |     |     |     |     |
| Asn | Ser | Gly | Leu | Leu | Gly | Thr | Leu | Val | Ala | Asp | Leu | Gln | Leu | Ile | 90  |
|     |     |     |     | 80  |     |     |     |     | 85  |     |     |     |     |     |     |
| Asp | Phe | Glu | Gly | Lys | Lys | Asp | Val | Ala | Gln | Ile | Phe | Asn | Asn | Ile | 105 |
|     |     |     |     | 95  |     |     |     |     | 100 |     |     |     |     |     |     |
| Leu | Arg | Arg | Gln | Ile | Gly | Thr | Arg | Thr | Pro | Thr | Val | Glu | Tyr | Ile | 120 |
|     |     |     |     | 110 |     |     |     |     | 115 |     |     |     |     |     |     |
| Cys | Thr | Gln | Gln | Asn | Ile | Leu | Phe | Met | Leu | Leu | Lys | Gly | Tyr | Glu | 135 |
|     |     |     |     | 125 |     |     |     |     | 130 |     |     |     |     |     |     |
| Ser | Pro | Glu | Ile | Ala | Leu | Asn | Cys | Gly | Ile | Met | Leu | Arg | Glu | Cys | 150 |
|     |     |     |     | 140 |     |     |     |     | 145 |     |     |     |     |     |     |
| Ile | Arg | His | Glu | Pro | Leu | Ala | Lys | Ile | Ile | Leu | Trp | Ser | Glu | Gln | 165 |
|     |     |     |     | 155 |     |     |     |     | 160 |     |     |     |     |     |     |
| Phe | Tyr | Asp | Phe | Phe | Arg | Tyr | Val | Glu | Met | Ser | Thr | Phe | Asp | Ile | 180 |
|     |     |     |     | 170 |     |     |     |     | 175 |     |     |     |     |     |     |
| Ala | Ser | Asp | Ala | Phe | Ala | Thr | Phe | Lys | Asp | Leu | Leu | Thr | Arg | His | 195 |
|     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |     |     |     |
| Lys | Leu | Leu | Ser | Ala | Glu | Phe | Leu | Glu | Gln | His | Tyr | Asp | Arg | Phe | 210 |
|     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |     |     |
| Phe | Ser | Glu | Tyr | Glu | Lys | Leu | Leu | His | Ser | Glu | Asn | Tyr | Val | Thr | 225 |
|     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     |     |
| Lys | Arg | Gln | Ser | Leu | Lys | Leu | Leu | Gly | Glu | Leu | Leu | Leu | Asp | Arg | 240 |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     |     |     |
| His | Asn | Phe | Thr | Ile | Met | Thr | Lys | Tyr | Ile | Ser | Lys | Pro | Glu | Asn | 255 |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     |     |     |
| Leu | Lys | Leu | Met | Met | Asn | Leu | Leu | Arg | Asp | Lys | Ser | Arg | Asn | Ile | 270 |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     |     |     |
| Gln | Phe | Glu | Ala | Phe | His | Val | Phe | Lys | Val | Phe | Val | Ala | Asn | Pro | 285 |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     |     |     |
| Asn | Lys | Thr | Gln | Pro | Ile | Leu | Asp | Ile | Leu | Leu | Lys | Asn | Gln | Thr | 300 |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     |     |     |     |
| Lys | Leu | Ile | Glu | Phe | Leu | Ser | Lys | Phe | Gln | Asn | Asp | Arg | Thr | Glu | 315 |
|     |     |     |     | 305 |     |     |     |     | 310 |     |     |     |     |     |     |
| Asp | Glu | Gln | Phe | Asn | Asp | Glu | Lys | Thr | Tyr | Leu | Val | Lys | Gln | Ile | 330 |
|     |     |     |     | 320 |     |     |     |     | 325 |     |     |     |     |     |     |
| Arg | Asn | Leu | Lys | Arg | Ala | Ala | Gln | Gln | Glu | Ala |     |     |     |     | 340 |
|     |     |     |     | 335 |     |     |     |     | 340 |     |     |     |     |     |     |

<210> 4

<211> 339

<212> PRT

<213> *Drosophila melanogaster*

<220> -

<223> g1794137

| Chemical          | Formula                                       | Weight | Volume | Conc. | Temp. | Time   | Notes |
|-------------------|---|--------|--------|-------|-------|--------|-------|
| Hydrochloric acid | HCl   | 36.5   | 1.18   | 12.1  | 100   | 10 min |       |
| Sulfuric acid     | H <sub>2</sub> SO <sub>4</sub>                | 98.1   | 1.84   | 18.3  | 100   | 10 min |       |
| Nitric acid       | HNO <sub>3</sub>                              | 63.0   | 1.42   | 15.2  | 100   | 10 min |       |
| Phosphoric acid   | H <sub>3</sub> PO <sub>4</sub>                | 97.9   | 1.70   | 10.4  | 100   | 10 min |       |
| Acetic acid       | CH <sub>3</sub> COOH                          | 60.0   | 1.05   | 5.9   | 100   | 10 min |       |
| Formic acid       | HCOOH   | 46.0   | 1.22   | 11.8  | 100   | 10 min |       |
| Oxalic acid       | C <sub>2</sub> H <sub>2</sub> O <sub>4</sub>  | 126.0  | 1.50   | 12.6  | 100   | 10 min |       |
| Malic acid        | C <sub>4</sub> H <sub>6</sub> O <sub>5</sub>  | 134.0  | 1.60   | 13.4  | 100   | 10 min |       |
| Succinic acid     | C <sub>4</sub> H <sub>6</sub> O <sub>4</sub>  | 118.0  | 1.50   | 11.8  | 100   | 10 min |       |
| Glutaric acid     | C <sub>5</sub> H <sub>8</sub> O <sub>4</sub>  | 146.0  | 1.50   | 14.6  | 100   | 10 min |       |
| Adipic acid       | C <sub>6</sub> H <sub>10</sub> O <sub>4</sub> | 146.0  | 1.50   | 14.6  | 100   | 10 min |       |
| Picric acid       | C <sub>6</sub> H <sub>3</sub> O <sub>6</sub>  | 176.0  | 1.80   | 17.6  | 100   | 10 min |       |
| Gallic acid       | C <sub>7</sub> H <sub>6</sub> O <sub>5</sub>  | 152.0  | 1.70   | 15.2  | 100   | 10 min |       |
| Ellagic acid      | C <sub>10</sub> H <sub>6</sub> O <sub>6</sub> | 226.0  | 1.80   | 22.6  | 100   | 10 min |       |
| Resorcinol        | C <sub>6</sub> H <sub>6</sub> O               | 110.0  | 1.20   | 11.0  | 100   | 10 min |       |
| Catechol          | C <sub>6</sub> H <sub>6</sub> O               | 110.0  | 1.20   | 11.0  | 100   | 10 min |       |
| Phenol            | C <sub>6</sub> H <sub>6</sub> O               | 94.0   | 1.07   | 9.4   | 100   | 10 min |       |
| Naphthalene       | C <sub>10</sub> H <sub>8</sub>                | 128.0  | 0.98   | 12.8  | 100   | 10 min |       |
| Anthracene        | C <sub>14</sub> H <sub>10</sub>               | 178.0  | 1.18   | 17.8  | 100   | 10 min |       |
| Fluorene          | C <sub>13</sub> H <sub>10</sub>               | 166.0  | 1.02   | 16.6  | 100   | 10 min |       |
| Acenaphthene      | C <sub>12</sub> H <sub>8</sub>                | 152.0  | 1.02   | 15.2  | 100   | 10 min |       |
| Indene            | C <sub>9</sub> H <sub>8</sub>                 | 116.0  | 0.93   | 11.6  | 100   | 10 min |       |
| Styrene           | C <sub>8</sub> H <sub>8</sub>                 | 104.0  | 0.91   | 10.4  | 100   | 10 min |       |
| Phenylacetylene   | C <sub>8</sub> H <sub>6</sub>                 | 102.0  | 0.91   | 10.2  | 100   | 10 min |       |
| Propyne           | C <sub>3</sub> H <sub>4</sub>                 | 40.0   | 0.69   | 4.0   | 100   | 10 min |       |
| Butyne            | C <sub>4</sub> H <sub>6</sub>                 | 54.0   | 0.69   | 5.4   | 100   | 10 min |       |
| Pentyne           | C <sub>5</sub> H <sub>8</sub>                 | 68.0   | 0.69   | 6.8   | 100   | 10 min |       |
| Hexyne            | C <sub>6</sub> H <sub>10</sub>                | 82.0   | 0.69   | 8.2   | 100   | 10 min |       |
| Heptyne           | C <sub>7</sub> H <sub>12</sub>                | 96.0   | 0.69   | 9.6   | 100   | 10 min |       |
| Octyne            | C <sub>8</sub> H <sub>14</sub>                | 110.0  | 0.69   | 11.0  | 100   | 10 min |       |
| Nonyne            | C <sub>9</sub> H <sub>16</sub>                | 124.0  | 0.69   | 12.4  | 100   | 10 min |       |
| Decyne            | C <sub>10</sub> H <sub>18</sub>               | 138.0  | 0.69   | 13.8  | 100   | 10 min |       |
| Undecyne          | C <sub>11</sub> H <sub>20</sub>               | 152.0  | 0.69   | 15.2  | 100   | 10 min |       |
| Dodecyne          | C <sub>12</sub> H <sub>22</sub>               | 166.0  | 0.69   | 16.6  | 100   | 10 min |       |
| Tridecyne         | C <sub>13</sub> H <sub>24</sub>               | 180.0  | 0.69   | 18.0  | 100   | 10 min |       |
| Tetradecyne       | C <sub>14</sub> H <sub>26</sub>               | 194.0  | 0.69   | 19.4  | 100   | 10 min |       |
| Pentadecyne       | C <sub>15</sub> H <sub>28</sub>               | 208.0  | 0.69   | 20.8  | 100   | 10 min |       |
| Hexadecyne        | C <sub>16</sub> H <sub>30</sub>               | 222.0  | 0.69   | 22.2  | 100   | 10 min |       |
| Heptadecyne       | C <sub>17</sub> H <sub>32</sub>               | 236.0  | 0.69   | 23.6  | 100   | 10 min |       |
| Octadecyne        | C <sub>18</sub> H <sub>34</sub>               | 250.0  | 0.69   | 25.0  | 100   | 10 min |       |
| Nonadecyne        | C <sub>19</sub> H <sub>36</sub>               | 264.0  | 0.69   | 26.4  | 100   | 10 min |       |
| Eicosyne          | C <sub>20</sub> H <sub>38</sub>               | 278.0  | 0.69   | 27.8  | 100   | 10 min |       |
| Heneicosyne       | C <sub>21</sub> H <sub>40</sub>               | 292.0  | 0.69   | 29.2  | 100   | 10 min |       |
| Docosyne          | C <sub>22</sub> H <sub>42</sub>               | 306.0  | 0.69   | 30.6  | 100   | 10 min |       |
| Tricosyne         | C <sub>23</sub> H <sub>44</sub>               | 320.0  |        |       |       |        |       |

<400> 4

[illegible]

<210> 5

<211> 377

<212> PRT

<213> Caenorhabditis elegans

<220> -

<223> q1255838

<400> 5

PF-0635-2 DIV

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Met | Pro | Leu | Leu | Phe | Gly | Lys | Ser | His | Lys | Ser | Pro | Ala | Asp | Val |  |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |  |
| Val | Lys | Thr | Leu | Arg | Glu | Val | Leu | Thr | Ile | Leu | Asp | Lys | Leu | Pro |  |
|     |     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |  |
| Pro | Pro | Lys | Leu | Asp | Lys | Asp | Gly | Asn | Ile | Gln | Ser | Asp | Lys | Lys |  |
|     |     |     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |  |
| Tyr | Asp | Lys | Ala | Leu | Asp | Glu | Val | Ser | Lys | Asn | Val | Ala | Met | Ile |  |
|     |     |     |     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |  |
| Lys | Ser | Phe | Ile | Tyr | Gly | Asn | Asp | Ser | Ala | Glu | Pro | Ser | Ser | Glu |  |
|     |     |     |     | 65  |     |     |     |     | 70  |     |     |     |     | 75  |  |
| His | Val | Val | Gln | Val | Ala | Gln | Leu | Ala | Gln | Glu | Val | Tyr | Asn | Ala |  |
|     |     |     |     | 80  |     |     |     |     | 85  |     |     |     |     | 90  |  |
| Asn | Ile | Leu | Pro | Met | Leu | Ile | Lys | Met | Leu | Pro | Lys | Phe | Glu | Phe |  |
|     |     |     |     | 95  |     |     |     |     | 100 |     |     |     |     | 105 |  |
| Glu | Cys | Lys | Lys | Asp | Val | Gly | Gln | Ile | Phe | Asn | Asn | Leu | Leu | Arg |  |
|     |     |     |     | 110 |     |     |     |     | 115 |     |     |     |     | 120 |  |
| Arg | Gln | Ile | Gly | Thr | Arg | Ser | Pro | Thr | Val | Glu | Tyr | Leu | Gly | Ala |  |
|     |     |     |     | 125 |     |     |     |     | 130 |     |     |     |     | 135 |  |
| Arg | Pro | Glu | Ile | Leu | Ile | Gln | Leu | Val | Gln | Gly | Tyr | Ser | Val | Pro |  |
|     |     |     |     | 140 |     |     |     |     | 145 |     |     |     |     | 150 |  |
| Asp | Ile | Ala | Leu | Thr | Cys | Gly | Leu | Met | Leu | Arg | Glu | Ser | Ile | Arg |  |
|     |     |     |     | 155 |     |     |     |     | 160 |     |     |     |     | 165 |  |
| His | Asp | His | Leu | Ala | Lys | Ile | Ile | Leu | Tyr | Ser | Asp | Val | Phe | Tyr |  |
|     |     |     |     | 170 |     |     |     |     | 175 |     |     |     |     | 180 |  |
| Thr | Phe | Phe | Leu | Tyr | Val | Gln | Ser | Glu | Val | Phe | Asp | Ile | Ser | Ser |  |
|     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |     | 195 |  |
| Asp | Ala | Phe | Ser | Thr | Phe | Lys | Glu | Leu | Thr | Thr | Arg | His | Lys | Ala |  |
|     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     | 210 |  |
| Ile | Ile | Ala | Glu | Phe | Leu | Asp | Ser | Asn | Tyr | Asp | Thr | Phe | Phe | Ala |  |
|     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     | 225 |  |
| Gln | Tyr | Gln | Asn | Leu | Leu | Asn | Ser | Lys | Asn | Tyr | Val | Thr | Arg | Arg |  |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |  |
| Gln | Ser | Leu | Lys | Leu | Leu | Gly | Glu | Leu | Leu | Leu | Asp | Arg | His | Asn |  |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |  |
| Phe | Asn | Thr | Met | Thr | Lys | Tyr | Ile | Ser | Asn | Pro | Asp | Asn | Leu | Arg |  |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |  |
| Leu | Met | Met | Glu | Leu | Leu | Arg | Asp | Lys | Ser | Arg | Asn | Ile | Gln | Tyr |  |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |  |
| Glu | Ala | Phe | His | Val | Phe | Lys | Val | Phe | Val | Ala | Asn | Pro | Asn | Lys |  |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |  |
| Pro | Lys | Pro | Ile | Ser | Asp | Ile | Leu | Asn | Arg | Asn | Arg | Glu | Lys | Leu |  |
|     |     |     |     | 305 |     |     |     |     | 310 |     |     |     |     | 315 |  |
| Val | Glu | Phe | Leu | Ser | Glu | Phe | His | Asn | Asp | Arg | Thr | Asp | Asp | Glu |  |
|     |     |     |     | 320 |     |     |     |     | 325 |     |     |     |     | 330 |  |
| Gln | Phe | Asn | Asp | Glu | Lys | Ala | Tyr | Leu | Ile | Lys | Gln | Ile | Gln | Glu |  |
|     |     |     |     | 335 |     |     |     |     | 340 |     |     |     |     | 345 |  |
| Met | Lys | Ser | Ser | Pro | Lys | Glu | Ala | Lys | Lys | Pro | Lys | Ser | Lys | Glu |  |
|     |     |     |     | 350 |     |     |     |     | 355 |     |     |     |     | 360 |  |
| Asp | Glu | Asn | Gln | Glu | Pro | Ala | Gly | Pro | Ser | Glu | Gly | Pro | Ser | Thr |  |
|     |     |     |     | 365 |     |     |     |     | 370 |     |     |     |     | 375 |  |
| Ser | Gln |     |     |     |     |     |     |     |     |     |     |     |     |     |  |